Nuclear Magnetic Resonance Spectrum (270 MHz, $CDCl_3$) δ ppm:

7.74 (2H, doublet, J=9 Hz);
7.24 (2H, doublet, J=9 Hz);
7.21 (2H, doublet, J=9 Hz);
6.98 (2H, doublet, J=9 Hz);
6.73 (1H, singlet);
6.40 (1H, singlet);
4.76 (2H, singlet);
3.50 (1H, singlet);
2.17 (3H, singlet).
Mass spectrum (EI) m/z: 344 [M^+].

EXAMPLE 130

1-(4-Acetylthiophenyl)-4-methyl-2-(4-sulfamoylphenyl)pyrrole (Compound No. 1-157)

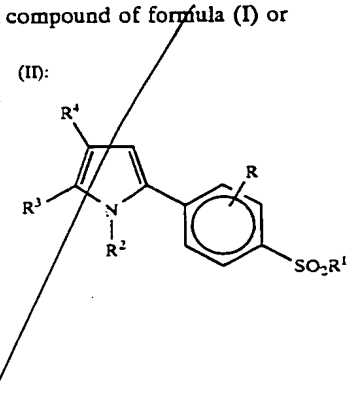
0.90 g (2.6 mmol) of 1-(4-mercaptophenyl)-4-methyl-2-(4-sulfamoylphenyl)-pyrrole (prepared as described in Example 129) was dissolved in 15 ml of tetrahydrofuran, and 0.27 ml (2.9 mmol) of acetic anhydride was added to the resulting solution. 0.53 ml (6.5 mmol) of pyridine was then added to the mixture, which was then stirred at room temperature overnight. The reaction mixture was then concentrated by evaporation under reduced pressure, and a saturated aqueous solution of sodium hydrogencarbonate was added to the residue. The resulting mixture was then extracted with ethyl acetate. The organic extract was washed with water and dried over anhydrous magnesium sulfate, after which it was concentrated by evaporation under reduced pressure. The residue thus obtained was applied to a silica gel chromatography column and eluted with a 3:2 by volume mixture of hexane and ethyl acetate, to give 0.44 g (yield 43%) of the title compound as a white powder, melting at 149–152° C.

Nuclear Magnetic Resonance Spectrum (270 MHz, $CDCl_3$) δ ppm:

7.75 (2H, doublet, J=9 Hz);
7.38 (2H, doublet, J=9 Hz);
7.22 (2H, doublet, J=9 Hz);
7.16 (2H, doublet, J=9 Hz);
6.80 (1H, singlet);
6.41 (1H, singlet);
4.78 (2H, singlet);
2.44 (3H, singlet);
2.18 (3H, singlet).
Mass spectrum (FAB) m/z: 386 [M^+].

We claim:

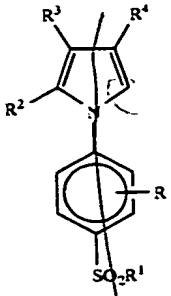
1. A compound of formula (I) or (II):



(I)

-continued

(II)



wherein:

R represents a hydrogen atom, a halogen atom or an alkyl group having from 1 to 6 carbon atoms;

R^1 represents an alkyl group having from 1 to 6 carbon atoms, an amino group or a group of formula $—NHR^a$, where R^a represents an alkanoyl group having from 1 to 25 carbon atoms, an alkoxycarbonyl group having from 1 to 6 carbon atoms in the alkoxy part, an aralkyloxycarbonyl group in which the aralkyl part is as defined below, an alkanoyloxymethyl group having from 1 to 6 carbon atoms in the alkanoyl part, an alkoxycarbonyloxymethyl group having from 1 to 6 carbon atoms in the alkoxy part or a (2-oxo-1,3-dioxolen-4-yl)methyl group which is unsubstituted or substituted at the 5-dioxolen position by an alkyl group having from 1 to 6 carbon atoms or by an aryl group as defined below;

R^2 represents a phenyl group which is unsubstituted or is substituted by at least one substituent selected from the group consisting of substituents α and substituents β defined below;

R^3 represents a hydrogen atom, a halogen atom or an alkyl group which has from 1 to 6 carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms;

R^4 represents a hydrogen atom; an alkyl group which has from 1 to 6 carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms; a cycloalkyl group having from 3 to 8 carbon atoms, an aryl group which is as defined below, or an aralkyl group which is as defined below;

said aryl group having from 6 to 14 ring carbon atoms in a carbocyclic ring and are unsubstituted or are substituted by at least one substituent selected from the group consisting of substituents α and substituents β, defined below;

said aralkyl group and the aralkyl part of said aralkyloxycarbonyl group are an alkyl group having from 1 to 6 carbon atoms and which are substituted by at least one aryl group as defined above;

said substituents α are selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms; said substituents β are selected from the group consisting of an alkyl group which has from 1 to 6 carbon atoms and which is

unsubstituted or are substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkythio group having from 1 to 6 carbon atoms; an alkanoyloxy group having from 1 to 6 carbon atoms; a mercapto group; an alkanoylthio group having from 1 to 6 carbon atoms; an alkylsulfinyl group having from 1 to 6 carbon atoms; a cycloalkyloxy group having from 3 to 8 carbon atoms; a haloalkoxy group having from 1 to 6 carbon atoms; and an alkylenedioxy group having from 1 to 6 carbon atoms;

or a pharmaceutically acceptable salt thereof.

2. The compound of claim 1, wherein R represents a hydrogen atom, a halogen atom or an alkyl group having from 1 to 4 carbon atoms.

3. The compound of claim 1, wherein R represents a hydrogen atom, a fluorine atom, a chlorine atom or a methyl group.

4. The compound of claim 1, wherein R represents a hydrogen atom.

5. The compound of claim 1, wherein R^1 represents a methyl group, an amino group or an acetylamino group.

Start 7

6. The compound of claim 1, wherein R^1 represents an amino group or an acetylamino group.

7. The compound of claim 1, wherein R^2 represents a phenyl group or a phenyl group which is substituted by at least one substituent selected from the group consisting of

a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms;

an unsubstituted alkyl group having from 1 to 4 carbon atoms; an alkyl group which has from 1 to 4 carbon atoms and which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms; a mercapto group; an alkanoylthio group having from 1 to 4 carbon atoms; a haloalkoxy group having from 1 to 4 carbon atoms and an alkylenedioxy group having from 1 to 4 carbon atoms.

8. The compound of claim 1, wherein R^2 represents a phenyl group or a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, a mercapto group, an alkanoylthio group having from 1 to 4 carbon atoms, a haloalkoxy group having from 1 to 4 carbon atoms and an alkylenedioxy group having from 1 to 4 carbon atoms.

9. The compound of claim 1, wherein R^3 represents a hydrogen atom, a halogen atom, an unsubstituted alkyl group having from 1 to 4 carbon atoms or a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms.

10. The compound of claim 1, wherein R^3 represents a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or a haloalkyl group having from 1 to 4 carbon atoms.

11. The compound of claim 1, wherein R^4 represents a hydrogen atom; an unsubstituted alkyl group having from 1 to 4 carbon atoms; a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a

halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms; a cycloalkyl group having from 3 to 6 carbon atoms; an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms, an unsubstituted alkyl group having from 1 to 6 carbon atoms, an alkyl group having from 1 to 6 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy having from 1 to 6 carbon atoms, and an alkylthio group having from 1 to 6 carbon atoms; a cycloalkyloxy group having from 3 to 8 carbon atoms; and an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one aryl group as defined in claim 1.

12. The compound of claim 1, wherein R^4 represents a hydrogen atom; an unsubstituted alkyl group having from 1 to 4 carbon atoms; a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom and an alkoxy group having from 1 to 6 carbon atoms; a cycloalkyl group having from 3 to 6 carbon atoms; an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms, an alkyl group having from 1 to 6 carbon atoms and which is unsubstituted or substituted by at least one halogen atom and a cycloalkyloxy group having from 3 to 8 carbon atoms; and an aralkyl group having from 1 to 4 carbon atoms, in the alkyl part and containing at least one said aryl group.

13. The compound of claim 1, wherein:

R represents a hydrogen atom, a halogen atom or an alkyl group having from 1 to 4 carbon atoms;

R^1 represents a methyl group, an amino group or an acetylamino group;

R^2 represents an unsubstituted phenyl group or a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom: an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 4 carbon atoms; an alkyl group having from 1 to 4 carbon atoms which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms; a mercapto group; an alkanoyl group having from 1 to 4 carbon atoms; a haloalkyl group having from 1 to 4 carbon atoms; and an alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an unsubstituted alkyl group having from 1 to 4 carbon atoms or a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from

the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 6 carbon atoms; an alkyl group having from 1 to 6 carbon atoms and substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having 1 to 4 carbon atoms and an alkylthio group having 1 to 4 carbon atoms; and a cycloalkoxy group having 3 to 8 carbon atoms; and an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

14. The compound of claim 1, wherein

R represents a hydrogen atom, a fluorine atom, a chlorine atom or a methyl group;

R^1 represents an amino group or an acetylamino group;

R^2 represents an unsubstituted phenyl group or a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having 1 to 4 carbon atoms, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, a mercapto group, an alkanoylthio group having from 1 to 4 carbon atoms, a haloalkoxy group having from 1 to 4 carbon atoms and an alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or a haloalkyl group having from 1 to 4 carbon atoms;

R^4 represents a hydrogen atom; an unsubstituted alkyl group having from 1 to 4 carbon atoms; a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom and alkoxy group having from 1 to 6 carbon atoms; a cycloalkyl group having from 3 to 6 carbon atoms, an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at lest one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms, an alkyl group having from 1 to 6 carbon atoms and which is unsubstituted or substituted by at least one halogen atom, and a cycloalkyloxy group having from 3 to 8 carbon atoms; and an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

15. The compound of claim 1, wherein:

R represents a hydrogen atom;

R^1 represents an amino group or an acetylamino group;

R^2 represents an unsubstituted phenyl group or a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms, an alkyl group having from 1 to 4 carbon atoms, a

haloalkyl group having from 1 to 4 carbon atoms, a mercapto group, an alkanoylthio group having from 1 to 4 carbon atoms, a haloalkoxy group having from 1 to 4 carbon atoms and an alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or a haloalkyl group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom and an alkoxy group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms, an alkyl group having from 1 to 6 carbon atoms and which is unsubstituted or substituted by at least one halogen atom, and a cycloalkyloxy group having from 3 to 8 carbon atoms; and

an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

16. The compound of claim 1, which is 4-methyl-2-(4-methylphenyl)-1-(4-sulfamoylphenyl)pyrrole.

17. The compound of claim 1, which is 2-(4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole.

18. The compound of claim 1, which is 2-(4-chlorophenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole.

19. The compound of claim 1, which is 4-methyl-2-(4-methylthiophenyl)-1-(4-sulfamoylphenyl)pyrrole.

20. The compound of claim 1, which is 2-(4-ethoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole.

21. The compound of claim 1, which is 2-(4-methoxy-3-methylphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole.

22. The compound of claim 1, which is 2-(3-fluoro-4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole.

23. The compound of claim 1, which is 2-(3,4-dimethylphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole.

24. The compound of claim 1, which is 4-methyl-1-(4-methylthiophenyl)-2-(4-sulfamoylphenyl)pyrrole.

[25. The compound of claim 1, which is 1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(4-methoxyphenyl)pyrrole.]

[26. The compound of claim 1, which is 1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(3,4-dimethylphenyl)pyrrole.]

27. A method of treating or relieving pain or inflammation in a mammal suffering comprising administering to a mammal in need thereof an effective anti-inflammatory amount or effective analgesic amount of a compound selected from the group consisting of the compound of formula (I), the compound of formula (II), and a pharmaceutically acceptable salt of said compounds as claimed in claim 1.

28. The method of claim 27, wherein:

R represents a hydrogen atom, a halogen atom or an alkyl group having from 1 to 4 carbon atoms;

R^1 represents a methyl group[,] an amino group [or an acetylamino group]; or

R^2 represents

an unsubstituted phenyl group or;

a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 4 carbon atoms; an alkyl group having from 1 to 4 carbon atoms and which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms; a mercapto group; an alkanoylthio group having from 1 to 4 carbon atoms; a haloalkoxy group having from 1 to 4 carbon atoms; and an alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an unsubstituted alkyl group having from 1 to 4 carbon atoms or a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 3 carbon atoms; an alkyl group having from 1 to 3 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms; and a cycloalkyloxy group having from 3 to 8 carbon atoms; and

an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

29. The method of claim 27, wherein:

R represents a hydrogen atom, a fluorine atom, a chlorine atom or a methyl group;

R^1 represents an amino group or an acetylamino group;

R^2 represents an unsubstituted phenyl group or a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms, an unsubstituted alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, a mercapto group, an alkanoylthio group having from 1 to 4 carbon atoms, a haloalkoxy group having from 1 to 4 carbon atoms and an alkenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or a haloalkyl group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom and an alkoxy group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group; a halogen atom; an alkoxy group having from 1 to 6 carbon atoms; an alkyl group having from 1 to 6 carbon atoms and which is unsubstituted or substituted by at least one halogen atom; and a cycloalkyl group having from 3 to 8 carbon atoms; and

an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

30. The method of claim **27**, wherein said anti-inflammatory and analgesic compound is selected from the group consisting of:

4-methyl-2-(4-methylphenyl)-1-(4-sulfamoylphenyl) pyrrole;

2-(4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

2-(4-chlorophenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

4-methyl-2-(4-methylthiophenyl)-1-(4-sulfamoylphenyl) pyrrole;

2-(4-ethoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

2-(4-methoxy-3-methylphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;

2-(3-fluoro-4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;

2-(3,4-dimethylphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole; and

4-methyl-1-(4-methylthiophenyl)-2-(4-sulfamoylphenyl) pyrrole;

1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(4-methoxyphenyl)pyrrole; and

1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(3,4-dimethylphenyl)pyrrole.

31. A method of inhibiting bone resorption in a mammal comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound selected from the group consisting of the compound of formula (I), the compound of formula (II), and a pharmaceutically acceptable salt of said compounds as claimed in claim 1.

32. The method of claim **31**, wherein:

R represents a hydrogen atom, a halogen atom or an alkyl group having from 1 to 4 carbon atoms;

R^1 represents a methyl group, an amino group or an acetylamino group;

R^2 represents

an unsubstituted phenyl group or

a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 4 carbon atoms; an alkyl group having from 1 to 4 carbon atoms and which is substituted by at least

one substituent selected from the group consisting of a halogen atom, an alkoxy group having 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms; a mercapto group; an alkanoylthio group having from 1 to 4 carbon atoms; a haloalkoxy group having from 1 to 4 carbon atoms and an alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an unsubstituted alkyl group having from 1 to 4 carbon atoms or a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 6 carbon atoms and an alkyl group having from 1 to 6 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms; and

an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

33. The method of claim 31, wherein:

R represents a hydrogen atom, a fluorine atom, a chlorine atom or a methyl group;

R^1 represents an amino group or an acetylamino group;

R^2 represents an unsubstituted phenyl group or

a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, a mercapto group, an alkanoylthio group having from 1 to 4 carbon atoms, a haloalkoxy group having from 1 to 4 carbon atoms and an alkenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or a haloalkyl group having from 1 to 4 carbon atoms;

R^4 represents a hydrogen atom, an unsubstituted alkyl group having from 1 to 4 carbon atoms, a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom and an alkoxy group having from 1 to 6 carbon atoms, a cycloalkyl group having from 3 to 6 carbon atoms, an aryl group which has from 6 to 10 ring carbon atoms

and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkyl group having from 1 to 6 carbon atoms and which is unsubstituted or substituted by at least one halogen atom, and a cycloalkyloxy group having from 3 to 8 carbon atoms, an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

34. The method of claim 31, wherein said active compound is selected from the group consisting of:

4-methyl-2-(4-methylphenyl)-1-(4-sulfamoylphenyl) pyrrole;

2-(4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

2-(4-chlorophenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

4-methyl-2-(4-methylthiophenyl)-1-(4-sulfamoylphenyl) pyrrole;

2-(4-ethoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

2-(4-methoxy-3-methylphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;

2-(3-fluoro-4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;

2-(3,4-dimethylphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole; and

4-methyl-1-(4-methylthiophenyl)-2-(4-sulfamoylphenyl) pyrrole;

1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(4-methoxyphenyl)pyrrole; and

1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(3,4-dimethylphenyl)pyrrole.

35. A method of inhibiting leukotriene production in a mammal comprising administering to a mammal in need thereof a compound selected from the group consisting of the compound of formula (I), the compound of formula (II) and a pharmaceutically acceptable salt of said compound as claimed in claim 1.

36. The method of claim 33, wherein:

R represents a hydrogen atom, a halogen atom or an alkyl group having from 1 to 4 carbon atoms;

R^2 represents a methyl group, an amino group or an acetylamino group;

R^2 represents

an unsubstituted phenyl group or a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 4 carbon atoms; an alkyl group having from 1 to 4 carbon atoms and which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms; a mercapto group; an alkanoylthio group having from 1 to 4 carbon atoms; a haloalkoxy group having from 1 to 4 carbon atoms; and an alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an unsubstituted alkyl group having from 1 to 4 carbon atoms or a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 6 carbon atoms; an alkyl group having from 1 to 6 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms; and a cycloalkyloxy group having from 3 to 8 carbon atoms; an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

37. The method of claim 35, wherein:

R represents a hydrogen atom, a fluorine atom, a chlorine atom or a methyl group;

R^1 represents an amino group or an acetylamino group;

R^2 represents

an unsubstituted phenyl group or

a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, a mercapto group, an alkanoylthio group having from 1 to 4 carbon atoms, a haloalkoxy group having from 1 to 4 carbon atoms and a alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or a haloalkyl group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group and an alkoxy group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group; a halogen atom; an alkoxy group having from 1 to 6 carbon atoms; an unsubstituted alkyl group having from 1 to 6 carbon atoms; an alkyl group having from 1 to 6 carbon atoms and which is unsubstituted or substituted by at least one halogen atom; and a cycloalkyloxy group having from 3 to 8 carbon atoms; and an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

38. The method of claim 35, wherein said active compound is selected from the group consisting of:
4-methyl-2-(4-methylphenyl)-1-(4-sulfamoylphenyl) pyrrole;
2-(4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;
2-(4-chlorophenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;
4-methyl-2-(4-methylthiophenyl)-1-(4-sulfamoylphenyl) pyrrole;
2-(4-ethoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;
2-(4-methoxy-3-methylphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;
2-(3-fluoro-4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;
2-(3,4-dimethylphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole; and
4-methyl-1-(4-methylthiophenyl)-2-(4-sulfamoylphenyl) pyrrole.
1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(4-methoxyphenyl)pyrrole; and
1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(3,4-dimethylphenyl)pyrrole.

39. A method of selectively inhibiting the activity of COX-2 in a mammal comprising administering to said mammal a pharmaceutically effective amount of a compound selected from the group consisting of the compound of formula (I), the compound of formula (II) and a pharmaceutically acceptable salt of said compounds as claimed in claim 1.

40. The method of claim 39, wherein:
R represents a hydrogen atom, a halogen atom or an alkyl group having from 1 to 4 carbon atoms;
R^1 represents a methyl group, an amino group or an acetylamino group;
R^2 represents
an unsubstituted phenyl group or
a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 4 carbon atoms; an alkyl group having from 1 to 4 carbon atoms and which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms; a mercapto group; an alkanoylthio group having from 1 to 4 carbon atoms; a haloalkoxy group having from 1 to 4 carbon atoms; and an alkylenedioxy group having from 1 to 4 carbon atoms;
R^3 represents a hydrogen atom, a halogen atom, an unsubstituted alkyl group having from 1 to 4 carbon atoms or a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms and an alkylthio group having from 1 to 4 carbon atoms;
R^4 represents
a hydrogen atom;
an unsubstituted alkyl group having from 1 to 4 carbon atoms;
a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group

consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a halogen atom; an alkoxy group having from 1 to 4 carbon atoms; an alkylthio group having from 1 to 4 carbon atoms; an unsubstituted alkyl group having from 1 to 6 carbon atoms; an alkyl group having from 1 to 6 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, an alkoxy group having from 1 to 6 carbon atoms and an alkylthio group having from 1 to 6 carbon atoms; and a cycloalkyloxy group having from 3 to 8 carbon atoms; and

an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

41. The method of claim 39, wherein:

R represents a hydrogen atom, a fluorine atom, a chlorine atom or a methyl group;

R^1 represents an amino group or an acetylamino group;

R^2 represents

an unsubstituted phenyl group or

a phenyl group which is substituted by at least one substituent selected from the group consisting of a halogen atom, an alkoxy group having from 1 to 4 carbon atoms, an alkylthio group having from 1 to 4 carbon atoms, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, a mercapto group, an alkanoylthio group having from 1 to 4 carbon atoms, a haloalkoxy group having from 1 to 4 carbon atoms and a alkylenedioxy group having from 1 to 4 carbon atoms;

R^3 represents a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or a haloalkyl group having from 1 to 4 carbon atoms;

R^4 represents

a hydrogen atom;

an unsubstituted alkyl group having from 1 to 4 carbon atoms;

a substituted alkyl group having from 1 to 4 carbon atoms and substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom, and an alkoxy group having from 1 to 6 carbon atoms;

a cycloalkyl group having from 3 to 6 carbon atoms;

an aryl group which has from 6 to 10 ring carbon atoms and which is unsubstituted or is substituted by at least one substituent selected from the group consisting of a hydroxy group, a halogen atom; an alkoxy group having from 1 to 6 carbon atoms; an alkyl group having from 1 to 6 carbon atoms which is unsubstituted or substituted by at least one halogen atom; and cycloalkyloxy group having from 3 to 8 carbon atoms; and

an aralkyl group having from 1 to 4 carbon atoms in the alkyl part and containing at least one said aryl group.

42. The method of claim 39, wherein said active compound is selected from the group consisting of:

4-methyl-2-(4-methylphenyl)-1-(4-sulfamoylphenyl) pyrrole;

2-(4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

2-(4-chlorophenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

4-methyl-2-(4-methylthiophenyl)-1-(4-sulfamoylphenyl) pyrrole;

2-(4-ethoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole;

2-(4-methoxy-3-methylphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;

2-(3-fluoro-4-methoxyphenyl)-4-methyl-1-(4-sulfamoylphenyl)pyrrole;

2-(3,4-dimethylphenyl)-4-methyl-1-(4-sulfamoylphenyl) pyrrole; and

4-methyl-1-(4-methylthiophenyl)-2-(4-sulfamoylphenyl) pyrrole;

1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(4-methoxyphenyl)pyrrole; and

1-(4-acetylaminosulfonylphenyl)-4-methyl-2-(3,4-dimethylphenyl)pyrrole.

43. The compound of claim 8, wherein the phenyl group is substituted with 1 to 3 of said substituents.

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